

REMARKS

Claims 1-4 and 6-25 are pending. By this Amendment, the specification is amended to correct typographical errors and claims 1-4 and 6-25 are amended for clarity. No new matter is introduced.

Applicants appreciates the courtesies extended to Applicants' representative, Mr. Paul Tsou during the July 5 personal interview. The substance of the personal interview is incorporated in the remarks below.

Applicants appreciate the Office Action's indication that claims 8 and 19-21 contain allowable subject matter. However, Applicants respectfully submit that all claims 1-4 and 6-25 should be allowed, as discussed in the remarks below.

The Office Action rejects claims 1, 11 and 12 under 35 U.S.C. §112, second paragraph. This rejection is respectfully traversed.

As discussed during the interview, the Office Action asserts that "a blending ratio" and "a user" recited in claims 1, 11 and 12 has insufficient antecedent basis. However, under MPEP §2173.05(e) (copy enclosed) "a claim is indefinite when it contains words or phrases whose meaning is unclear." An example of such indefiniteness is the use of the word "the" or "said" to introduce an element without having first introduced the element using the article "a." However, as indicated by the Office Action, the limitations in question are all introduced with the article "a." Thus, failing to introduce elements using the article "a" cannot be the basis of the §112, second paragraph rejection.

Additionally, the term "user" and "blending ratio" are disclosed in the specification. For example, on page 8, line 7, the specification discloses: "the user then inputs a reference number of a color chip...." On page 18, line 8, the specification discloses "a user then selects a desired blending ratio among the blending ratios displayed...." Thus, the limitations "a user" and "a blending ratio" are discussed in the specification and the Office Action rejection

under §112, second paragraph cannot be based on a lack of specification support. In any case, the above noted MPEP section indicates that a claim term which has no antecedent basis in the disclosure is not necessarily indefinite.

In view of the above, there is no basis for the Office Action §112, second paragraph rejection either in the lack of proper introduction of the noted elements or the lack of proper support of the specification. Further, claims 1, 11 and 12 have been amended for clarity, and as agreed during the interview, the §112, second paragraph, rejection has been overcome. Accordingly, withdrawal of the rejection of claims 1, 11 and 12 under §112, second paragraph is respectfully solicited.

The Office Action rejects claims 1-4, 6, 7, 9-18 and 22-25 under 35 U.S.C. §103 over "Model and Representation: The Effect of Visual Feedback on Human Performance in a Color Picker Interface," Douglas et al. (Sarah) in view of U.S. Patent No. 6,750,992 (Holub).¹ This rejection is respectfully traversed.

On the outset, the Office Action asserts that "a blending ratio" can be considered as normalized values of XYZ in Table II on page 105 of Sarah. As agreed to during the interview, Table II of Sarah does not disclose blending ratios for the following reasons:

1. A blending ratio by definition are multiple parts of a whole. Thus, the sum of all the portions of the ratio must equal to 100%. For example, as shown in Fig. 6 of the specification, the colorants (color 1 - color 4) are blending ratios where the sum of all the proportions adds up to exactly 1. In contrast, Table II of Sarah shows XYZ values for different color names in which the sum of the XYZ values for none of the color names adds

¹ While the Office Action's statement of rejection did not include Holub, Holub was added at the bottom of page 4 of the Office Action for the purpose of rendering obvious limitations directed to a network. However, claims 1, 11 and 12 do not recite a network. Claim 13 recites a server which implies a network. Thus, the addition of Holub appears to be moot relative to claims 1, 11 and 12.

up to 1. In fact, the sum of the XYZ values add up to different values for different color names. Accordingly, Table II in Sarah does not disclose a blending ratio or ratios of any kind. As Sarah disclosed:

Later, the Commission Internationale de l'Eclairage (CIE) standardized the XYZ space for use in applications that demand precise measurement of color, such as lighting, television, or pigment manufacture. The CIE model presumes measurement by a mechanical device, and the X, Y, and Z parameters of the model are linear combinations of the parameters of the response curves of the cones in the human eye.

(Sarah, P97/L21-27). As disclosed above, the X, Y and Z are linear combinations of parameters of the response curves of cones in the human eye. Accordingly, Table II in Sarah does not disclose a blending ratio.

The Office Action further asserts that Table II in Sarah disclosed colorants based on stored data. (Unfortunately the Office Action did not indicate the page number reference in Sarah but only the line numbers). However, as noted above and discussed during the interview, Table II disclosed parameters of response curves of cones in the human eye and not colorants. Rolleston (U.S. Patent No. 5,483,360) which was applied in earlier Office Actions) disclosed:

Printers commonly have an output which can be defined as existing in a color space called CMYK (cyan-magenta-yellow-key or black) which is uniquely defined for the printer by its capabilities and **colorants**. Printers operate by the addition of multiple layers of ink or **colorant** in layers to a page.

(Rolleston, C2/L12-17, emphasis added.) Here, Rolleston disclosed that a colorant is an ink of a printer. A colorant is distinguished from parameters of a color space such as CMYK. As disclosed in Sarah, the XYZ forms a color space similar to CMYK disclosed in Rolleston. Thus, Table II XYZ values are not a blend of ratios of colorants. Accordingly, the rejection of claims 1-4, 6, 7, 9-18 and 22-25 should be withdrawn on this basis alone.

The Office Action further asserts that Sarah in Fig. 3 illustrates a color chip as recited in claims 1, 11 and 12. This assertion is respectfully traversed.

As discussed during the interview, the specification discloses on page 8, line 7, a color chip may be selected from a standard color atlas for paints. Thus, a color chip cannot be something that is displayed on a computer monitor but rather a color chip is a physical sample representing a color. This is confirmed by the ordinary meaning of the term "color chip" as defined by Webster's Third New International Dictionary (copy enclosed). There, color chip is defined as "a small usually paper sample representing a color." Thus, the Office Action assertion that one of the monitor displayed small rectangles shown in Fig. 3 of Sarah was a color chip is incorrect.

As would have been well known to one of ordinary skill in the art, and confirmed in the art applied during prior Office Actions, a CRT displayed color is generated using RGB's color space and may be significantly different from color reproduced by a printer or other physical embodiments of color. Thus, a representation of a color chip on a CRT cannot be used to compare its color with color of a physical item that must be replicated by a blend of colorants. Hence, Sarah is not directed to colorants but rather **color matching** having two small rectangles displaying color from the same CRT without any connection to physical color reproduction. Accordingly, Sarah did not disclose or suggest a color chip and was directed to an art that was completely different from and unrelated to the subject matter recited in claims 1, 11 and 12.

The Office Action further asserts that Sarah in Table II showed differences of color data. However, as agreed to during the interview, Sarah did not disclose or suggest receiving data of differences of color specification values, as recited in claims 1, 11 and 12.

While Table II shows XYZ values for different colors as indicated by the respective color names, there was nothing in Table II that disclosed a difference between the XYZ

values between two different colors such as between dark skin and light skin. In fact, there was no use for such a difference in Sarah. The whole point of Sarah was to test efficiencies of different feedback mechanisms for a person to change one color into another. As shown in Figs. 3 and 4 of Sarah, a display was provided where a desired color is displayed next to an undesired color and a user moved the sliders representing XYZ, for example, to change the undesired color into the desired color. The sliders represented **absolute** values (as opposed to differences in value) of each of the X, Y and Z parameters that span the color space. That is, the vertical bar represented the complete range of each of the parameters of the color space. The user moved the sliders (arrows) up and down the complete color space to change the control color (undesired color) to match the desired color. There was nothing in Sarah that disclosed or suggested entering a difference of color specifications, as recited in claims 1, 11 and 12. Rather, Sarah disclosed a user entering **absolute** values by sliding arrows of each of the parameters in the color space.

In view of the above, Sarah did not disclose or suggest a blending ratio, a color chip and/or differences of color specification values. The Office Action cites Holub to introduce networks. However, claims 1, 11 and 12 do not recite networks and Holub did not supply the subject matter lacking in Sarah. Thus, Sarah and Holub, individually or in combination, would not have rendered obvious the subject matter recited in claims 1, 11 and 12. Claims 2-4, 6, 7, 9, 10, 22 and 23 depend from claim 1 and claims 13-18, 24 and 25 depend from claim 11. Hence, Sarah and Holub, individually or in combination, would not have rendered obvious the subject matter recited in claims 1-4, 6, 7, 9-18 and 22-25. Withdrawal of the rejection of claims 1-4, 6, 7, 9-18 and 22-25 is respectfully solicited.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable consideration and prompt allowance of claims 1-4 and 6-25 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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Attachments:

Petition for Extension of Time

MPEP §2173.05(e)

Relevant Portions of Webster's Third New International Dictionary

Date: July 7, 2006

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- (A) "R is halogen, for example, chlorine";
- (B) "material such as rock wool or asbestos" *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1949);
- (C) "lighter hydrocarbons, such, for example, as the vapors or gas produced" *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949); and
- (D) "normal operating conditions such as while in the container of a proportioner" *Ex parte Steigerwald*, 131 USPQ 74 (Bd. App. 1961).

>The above examples of claim language which have been held to be indefinite are fact specific and should not be applied as *per se* rules. See MPEP § 2173.02 for guidance regarding when it is appropriate to make a rejection under 35 U.S.C. 112, second paragraph.<

2173.05(e) Lack of Antecedent Basis [R-1]

A claim is indefinite when it contains words or phrases whose meaning is unclear. The lack of clarity could arise where a claim refers to "said lever" or "the lever," where the claim contains no earlier recitation or limitation of a lever and where it would be unclear as to what element the limitation was making reference. Similarly, if two different levers are recited earlier in the claim, the recitation of "said lever" in the same or subsequent claim would be unclear where it is uncertain which of the two levers was intended. A claim which refers to "said aluminum lever," but recites only "a lever" earlier in the claim, is indefinite because it is uncertain as to the lever to which reference is made. Obviously, however, the failure to provide explicit antecedent basis for terms does not always render a claim indefinite. If the scope of a claim would be reasonably ascertainable by those skilled in the art, then the claim is not indefinite. *Ex parte Porter*, 25 USPQ2d 1144, 1145 (Bd. Pat. App. & Inter. 1992) ("controlled stream of fluid" provided reasonable antecedent basis for "the controlled fluid"). Inherent components of elements recited have antecedent basis in the recitation of the components themselves. For example, the limitation "the outer surface of said sphere" would not require an antecedent recitation that the sphere has an outer surface. >*See Bose Corp. v. JBL, Inc.*, 274 F.3d 1354, 1359, 61 USPQ2d 1216, 1218-19 (Fed. Cir 2001) (holding that recitation of "an ellipse" provided antecedent basis for "an ellipse having a major diameter" because "[t]here

can be no dispute that mathematically an inherent characteristic of an ellipse is a major diameter").<

EXAMINER SHOULD SUGGEST CORRECTIONS TO ANTECEDENT PROBLEMS

Antecedent problems in the claims are typically drafting oversights that are easily corrected once they are brought to the attention of applicant. The examiner's task of making sure the claim language complies with the requirements of the statute should be carried out in a positive and constructive way, so that minor problems can be identified and easily corrected, and so that the major effort is expended on more substantive issues. However, even though indefiniteness in claim language is of semantic origin, it is not rendered unobjectionable simply because it could have been corrected. *In re Hammack*, 427 F.2d 1384 n.5, 166 USPQ 209 n.5 (CCPA 1970).

A CLAIM TERM WHICH HAS NO ANTECEDENT BASIS IN THE DISCLOSURE IS NOT NECESSARILY INDEFINITE

The mere fact that a term or phrase used in the claim has no antecedent basis in the specification disclosure does not mean, necessarily, that the term or phrase is indefinite. There is no requirement that the words in the claim must match those used in the specification disclosure. Applicants are given a great deal of latitude in how they choose to define their invention so long as the terms and phrases used define the invention with a reasonable degree of clarity and precision.

A CLAIM IS NOT PER SE INDEFINITE IF THE BODY OF THE CLAIM RECITES ADDITIONAL ELEMENTS WHICH DO NOT APPEAR IN THE PREAMBLE

The mere fact that the body of a claim recites additional elements which do not appear in the claim's preamble does not render the claim indefinite under 35 U.S.C. 112, second paragraph. See *In re Larsen*, No. 01-1092 (Fed. Cir. May 9, 2001) (unpublished) (The preamble of the *Larsen* claim recited only a hanger and a loop but the body of the claim positively recited a linear member. The examiner rejected the claim under 35 U.S.C. 112, second paragraph, because the omission from the claim's preamble of a critical element (i.e., a linear member) renders that

claim indefinite. The court reversed the examiner's rejection and stated that the totality of all the limitations of the claim and their interaction with each other must be considered to ascertain the inventor's contribution to the art. Upon review of the claim in its entirety, the court concluded that the claim at issue apprises one of ordinary skill in the art of its scope and, therefore, serves the notice function required by 35 U.S.C. 112, paragraph 2.).

2173.05(f) Reference to Limitations in Another Claim

A claim which makes reference to a preceding claim to define a limitation is an acceptable claim construction which should not necessarily be rejected as improper or confusing under 35 U.S.C. 112, second paragraph. For example, claims which read: "The product produced by the method of claim 1." or "A method of producing ethanol comprising contacting amylose with the culture of claim 1 under the following conditions" are not indefinite under 35 U.S.C. 112, second paragraph, merely because of the reference to another claim. See also *Ex parte Porter*, 25 USPQ2d 1144 (Bd. Pat. App. & Inter. 1992) where reference to "the nozzle of claim 7" in a method claim was held to comply with 35 U.S.C. 112, second paragraph. However, where the format of making reference to limitations recited in another claim results in confusion, then a rejection would be proper under 35 U.S.C. 112, second paragraph.

2173.05(g) Functional Limitations [R-3]

A functional limitation is an attempt to define something by what it does, rather than by what it is (e.g., as evidenced by its specific structure or specific ingredients). There is nothing inherently wrong with defining some part of an invention in functional terms. Functional language does not, in and of itself, render a claim improper. *In re Swinehart*, 439 F.2d 210, 169 USPQ 226 (CCPA 1971).

A functional limitation must be evaluated and considered, just like any other limitation of the claim, for what it fairly conveys to a person of ordinary skill in the pertinent art in the context in which it is used. A functional limitation is often used in association with an element, ingredient, or step of a process to define a particular capability or purpose that is served by the recited element, ingredient or step. >In *Innova/Pure*

Water Inc. v. Safari Water Filtration Sys. Inc., 381 F.3d 1111, 1117-20, 72 USPQ2d 1001, 1006-08 (Fed. Cir. 2004), the court noted that the claim term "operatively connected" is "a general descriptive claim term frequently used in patent drafting to reflect a functional relationship between claimed components," that is, the term "means the claimed components must be connected in a way to perform a designated function." "In the absence of modifiers, general descriptive terms are typically construed as having their full meaning." *Id.* at 1118, 72 USPQ2d at 1006. In the patent claim at issue, "subject to any clear and unmistakable disavowal of claim scope, the term 'operatively connected' takes the full breath of its ordinary meaning, i.e., 'said tube [is] operatively connected to said cap' when the tube and cap are arranged in a manner capable of performing the function of filtering." *Id.* at 1120, 72 USPQ2d at 1008.<

Whether or not the functional limitation complies with 35 U.S.C. 112, second paragraph, is a different issue from whether the limitation is properly supported under 35 U.S.C. 112, first paragraph, or is distinguished over the prior art. A few examples are set forth below to illustrate situations where the issue of whether a functional limitation complies with 35 U.S.C. 112, second paragraph, was considered.

It was held that the limitation used to define a radical on a chemical compound as "incapable of forming a dye with said oxidizing developing agent" although functional, was perfectly acceptable because it set definite boundaries on the patent protection sought. *In re Barr*, 444 F.2d 588, 170 USPQ 33 (CCPA 1971).

In a claim that was directed to a kit of component parts capable of being assembled, the Court held that limitations such as "members adapted to be positioned" and "portions . . . being resiliently dilatable whereby said housing may be slidably positioned" serve to precisely define present structural attributes of interrelated component parts of the claimed assembly. *In re Venezia*, 530 F.2d 956, 189 USPQ 149 (CCPA 1976).

2173.05(h) Alternative Limitations

I. MARKUSH GROUPS

Alternative expressions are permitted if they present no uncertainty or ambiguity with respect to the question of scope or clarity of the claims. One

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Third
New International
Dictionary
OF THE ENGLISH LANGUAGE
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clubs) b : the other suit of the same color as the trump suit
c : sum 7&(1) d : COULEUR 2b

SUN CHROMA, HUE, SHADE, TINT, TINGE, TONE: COLOR is the generic and most general term in this set. **CHROMA**, usu. limited to scientific or technical writing, may stress the attributes of hue and saturation, as in bright red or dull green, in contrast to white, grays, or black, which do not possess these attributes. **HUE** may suggest that property by which colors of the spectrum are distinguished one from another and from corresponding grays (all the gradational hues of the spectrum from red through yellow, green, blue, to violet — *Scientific Monthly*) In less scientific use it indicates merely color or gradation or modification of color (livid with the hue of death — Mary W. Shelley) (*Their shining green has changed to a less vivid hue* — Lafcadio Hearn). **SHADE** is usu. used to indicate a gradation of a color or hue according to lightness or brightness. It often but not always suggests a darker rather than lighter gradation. **TINT** indicates a gradation of a color or hue, usu. either a lighter gradation, one oriented toward white, or a gradation of a light color (Father Latour had often remarked that this tree seemed especially designed in shape and color for the adobe village. The sprays of bloom which adorn it are merely another shade of the red earth walls, and its fibrous trunk is full of gold and lavender tints — Willa Cather). **TINGE** suggests an interfusion or an overlay, stain, dappling, or flecking of one color over or into another general background color (in ore it copper) is red in color, but a freshly fractured surface of the pure metal has a pinkish or yellowish tinge — *New Yorker*). In nontechnical writing **COLOR**, **HUE**, **SHADE**, and **TINT** are often interchangeable (flowing ... now over rocks of greenish hue and again over those of brownish tint — *Amer. Guide Series. N. H.*). **TO TONE**, while often equivalent to **COLOR**, suggests more particularly hue or a modification of hue, as tint or shade (from strand to clouded-peach, the tone was purple — William Beebe) (it dun was also very much used as a couplet to other terms, like brown, red, yellow, etc., to express dull, grayed tones of such colors — A.J. Maerz & M.R. Paul). **SYN** see in addition **FLAG**

under colors of a horse : in an official race (the colt ... made his first appearance **under colors** at Hialeah — G.O.F.T. Ryall); with flying colors : eminently successful; **VICARIOUS, UNDEFEATED, IRREPROACHABLE**

color \\'kôl\ or \kôl\ adj: colored, colouring \kôl\ing\ colors **see - or in Explan. Notes** [ME colouren, fr. L **colorare**, fr. **color**, n.] v t 1: to give color to; imbue with color 2: to change or alter the color of (as by dyeing, staining, or painting) — **over-dye**, **tinge**, **tint**, **shade**, **toner**, **stain** 2: to change or alter one's color by dyeing or painting: as a: to misrepresent, disguise, distort, bias (a highly ~ed version of the facts) b: **GLOSS**, **PALLIATE**, **EXCUSE** (a lie) 3 obs: to misrepresent as one's own 4: **INFLUENCE**, **SHAPE**, **CONDITION**, **AFFECT** (the lives of most of us have been ~ed by politics — Christine Weston) (how much the contemplation of death has ~ed human thought — H.L. Mencken) 5: to imbue (as a piece of writing) with a subjective quality or cause to produce a particular emotional effect (his writings were ~ed by his feelings) 6: to produce a fine finish on (a metal) by polishing with rouge or lime 7: to modify the articulation or acoustic quality of (a speech sound) (an r-colored vowel) ~ vi: to take on or acquire a color: a: to take on the color of ripeness (as of grapes) b: **BLUSH**, **FLUSH** (~ed as though she had said something very daring — Willard Robertson) **color** \\'kôl\ adj — **see - or in Explan. Notes** [color] : showing or dealing with or concerned with color: a: concerned with skin pigmentation : **RACIST** (the ~ line) b: capable of reproducing color : showing things in color (~ photography) c: capable of producing more than one color at a single operation (a two-color press); also: used to print one color in a job printed in two or more colors (a ~ cut) (a ~ border) **color-a-ble-ly**, \kôl\ing\rs\bil\d\-, -at\-, -i\ n -es: the quality of being colorable **color-a-ble** \kôl\ing\rs\bol\ adj [ME, fr. MF **colorable**, fr. color + able] 1: seemingly valid and genuine: having an appearance of truth, right, or justice : **PLAUSIBLE** (any ~ pretext for refusing — Bertrand Russell) 2: **FEIGNED**, **FACITIOUS**, **COUNTERFEIT** (~ and false pretenses) — **col-or-a-bly** \kôl\ing\rs\bil\adv **col-o-rad-an** \kôl\ôrad\an\, -râ-, -râ- **archaic** — or **col-o-ado-an** \daw\an\ adj, usu cap [Colorado, state of U.S. + E- and I: of, relating to, or characteristic of the state of Colorado 2: of, relating to, or characteristic of Coloradans **coloradan** \\" or **coloradoan** \\" n -s cap : a native or resident of the state of Colorado **col-o-ro-do** \'-dô-, -dô\ adj, usu cap [fr. Colorado, state of U.S., fr. the Colorado river, fr. Sp. lit., red, reddish (part of **colorar** to color) fr. **L coloratus**, past part. of **colorare** to color — more at COLOR] 1: of or from the state of Colorado (the Colorado mountains) : of the kind or style prevalent in Colorado : **COLORADAN** 2: of or relating to a subdivision of the American Upper Cretaceous — see **GEOLGIC TIME TABLE** **colorado** \\", p. **col** or **colorados** usu cap [Sp. lit., red, reddish] 1: a: a Boracon people at the foot of the western Andes, Ecuador b: a member of such people 2: the language of the Colorado people **colorado** \", -rs\ AmSp. fr. Sp. **colorado**, adj.]: a cigar of medium color and strength **colorado blue spruce** usu cap C : **COLORADO SPRUCE**; sp: a pendulous-branched spruce (*Picea pungens kosteriana*) that is a variety of this tree **colorado bur** n, usu cap C : **PUFFALO DUR** **colorado fir** n, usu cap C : **WHITE FIR** (a(1)) **colorado grass** n, usu cap C : **TEXAS MILLET** **colo-ro-ra-do** \'-dô, \'-wîl\ n -s [Colorado, its locality + E -ite] : a grayish black mineral with metallic luster consisting of mercury telluride HgTe (gr. 8.6) **colorado manroot** n, usu cap C : **MAN-OF-THE-EARTH** **colorado potato beetle** or **colorado beetle** n, usu cap C : a black-and-yellow striped beetle (*Leptinotarsa decemlineata*) orig. found in the eastern foothills of the Rocky mountains where it fed on the sandbur (*Solanum rostratum*) but now feeding in both the larval and adult stages on the leaves of the potato, often doing great damage and spread into most potato-growing regions of the world **colorado ranger** n, usu cap C [**"Colorado**]: a parti-colored horse of a breed developed in the western U.S. by interbreeding bars with native stock ultimately of Spanish origin **colorado river hemp** n, usu cap C & R: a tall-growing annual legume (*Sesbania exaltata*) of the southwestern U.S. that produces a strong tough bast fiber formerly used by the Indians for cordage and that is widely used as a green manure esp. on heavy moist soils — called also *sesbania* **colorado rubber plant** or **colorado rubber weed** n, usu cap C : any of several herbs of the genus *Hymenoxys* (family Composite) of the western U.S. that contain small quantities of rubber **colorado spruce** n, usu cap C : a tall wide-spreading evergreen tree (*Picea pungens*) often planted for ornament — called also **blue spruce**, **Colorado blue spruce**, **silver spruce** **colorado steer hide** or **colorado steer** n, usu cap C : a hide from a side-branded steer

tude: PERSUASION, ATTITUDE, INCLINATION (the chameleon talent for taking on the intellectual ~ of whatever idea he happened to fasten onto—Budd Schulberg); **3** : subtle variation of intensity or quality of tone (a haunting ~ in the string passages of the concerto) (*a certain odd ~ in his voice*)
col-or-a-tion \kəl'or-ə-tā'shən\ adj : of, relating to, or depending on coloration
col-or-a-tive \kəl'or-ə-tiv\ adj [coloration + -ive] **1** : that colors **2** : consisting of or depending upon coloration (the protection of certain animals)
col-or-a-tu-ra \kəl'or-ə-tü'rə\ kəl'-ə-n-s often attrib [obs. lit. coloring, fr. LL. fr. L. *coloratus* + *-ura* -ure] **1** : the florid ornamentation in vocal music (as runs, trills, arpeggios); **2** : music characterized by ornate figuration **2** : one that sings or has the ability to sing coloratura; *usu* : a soprano singer of coloratura
col-or-a-ture \kəl'or-ə-tü'rə\ n -s {G or It; G *koloratur*, fr. It *coloratura*} : COLORATURA
color balance \kəl'or-bal'ans\ n **1** : a distribution of colors (as in a painting) resulting in a feeling of fitness, satisfaction, and beauty **2** : the chromatic characteristics of the reproduction of gray tones in a color photograph
color-ball pool \kəl'or-bäl pôl\ : ENGLISH POOL
color bar n **1** : a bar or barrier hindering or preventing colored persons from participating with whites in various activities and ranging in severity from social discrimination and conventional debarring from some occupations to a strict legally enforced exclusion from any skilled occupations (as in the Union of So. Africa)
color base : DYE BASE
color-barer \kəl'or-bär\ n : one that carries a color or standard esp. in a military parade or drill
color-blind \kəl'or-blind\ adj **1** a : afflicted with a congenital or acquired partial or total inability to distinguish one or more chromatic colors **b** : not noticing or considering : BLIND, INSENSITIVE, OBFUSCATE *(laws color-blind to economic reality)* **2** of a photographic film or emulsion : sensitive only to blue, violet, and ultraviolet light
color blindness n : the state of being color-blind : inability or marked difficulty in distinguishing chromatic color — compare CHROMATIC VISION, DICROMATISM, MONOCHROMATISM, TRICHRONATISM
color-breed \kəl'or-brēd\ v t : to breed selectively for the development of particular colors (~ing canaries for red)
color camera n : a camera of special design for making color separation negatives (as a beam-splitter camera or a one-shot camera)
colorcast \kəl'or-käst\ n -s {color + telecast} : a television broadcast in color
colorcast \kəl'or-käst\ vb colorcast also colorcasted; colorcast also colorcasted; colorcasting; colorcasts : to broadcast in color over television
color cell n : CHROMOCYTE
color change n : a fraudulent or accidental change in the color of a particular postage stamp; also : an authorized change in a particular denomination of stamp
color changing n : a postage stamp whose color has changed as a result of chemical action
color chart n : a systematic arrangement of colors or their representations with respect to either the attributes of the colors or the mixing relations of their stimuli
color chest n : a chest for signal flags (as on a ship)
color chip n : a small usu. paper sample representing a color
color cinematography n : cinematography that uses a color photography process
color circle n : an arrangement of hues in their natural spectrum order (red, orange, yellow, green, blue, violet plus the purples) about the circumference of a circle usu. with pairs of complementary hues represented on the opposite ends of diameters
color colotype n : colotype in more than one color; often colotype in four or more colors
color company n : the company with which the colors are posted for military ceremonies and drills
color constancy n : tendency of the colors perceived as belonging to objects to remain invariable in spite of changes in amount and spectral quality of illumination
color cycle n **1** : COLOR CIRCLE **2** : recurrence of colors as they reach peak in fashion
color developer n : a developer in color photography that after becoming oxidized combines with a coupler to form a dye that is deposited along with the developed silver in the image, the silver image being then bleached to leave the colored image
color diagram n : a diagram showing relations between colors or facts of color mixture; **see also** : COLOR CHART
color dimension n : one in any set of three dimensions used for describing or measuring color — compare COLOR SOLID
col-ored \kəl'or-ed\ adj [ME *coloured*, fr. past part. of *colouren* to color — more at COLOR] **1** : marked by color **a** : having or showing usu. chromatic color (white and ~ lights) (*advertisements on ~ paper*); sometimes : having a color other than the accustomed or expected (~ glass) (*a green and a ~ leaf*) **2** a : FEIGNED, PRETENDED (a ~ ally) **b** : glossed over; made to appear less extreme : PALLIATED (*his ~ crimes*) **c** : ADORNED, EMBELLISHED (the ~ verse of Claudioan —Arthur Symons) ; made colorful (the pictures, ~ and racy, which Captain Nichols' vivid account offered —W.S. Maugham) : EXAGGERATED, SLANTED, BIASED (~ political news —F.L. Mott) (*the prosecutor's well-colored evidence* —Arthur Morrison) **d** : ORIENTED, ALIGNED (politically ~ labor unions) **3** sometimes cap **a** : of some other race than the white; often : Negro or having some proportion of Negro blood **b** : of, or for, or relating to colored persons (a teacher in ~ schools) **4** sometimes cap **a** : of mixed race (the people, as contrasted with the Negroes of St. Thomas) **b** Africa : of or relating to the Cape Colored
colored \kəl'or\ n -s sometimes cap **1** : colored people (*education of the ~*) **2** : a colored person (a school for ~)
colored corpuscle n : a red blood cell
colored vision n : CHROMATOPSIS
color emissivity n : monochromatic emissivity
col-or-er \kəl'or-ər\ n -s : one that colors: as **a** : one that coats gold articles with zinc or gold to secure uniform color **b** : one that applies colored glaze to tiles using a bulb pen **c** : a worker who brushes coloring fluid over hides
colorfast \kəl'or-fäst\ adj : having color that retains its original hue esp. without fading or running in washing, cleaning, wearing, or long exposure to light — **col-or-fast-ness** n -es
color-fest \kəl'or-fest\ v t : to feed (as canaries) elements intended to enrich the color of plumage
color film n : a photographic film used for making color pictures
color filter n : a filter (as of glass, gelatin, or liquid) that absorbs light of certain wavelengths or colors selectively and is used for modifying the light that reaches a sensitized material esp. for increasing contrast, photographing through haze, or making color-separation negatives — called also color screen, light filter
col-or-full \kəl'or-fü'l\ adj **1** : marked by much color or many colors esp. those that are bright or vivid (the ~ scenery of the area); ATTRACTIVELY COLORED **2** : compelling attention or interest; striking because of lively animation, diverting variety, compelling individual manner, distinctive procedure, or unusual content often exaggerated (*a ~ pageant*) (*a ~ athlete*)
light filter n : a filter (as of glass, gelatin, or liquid) that absorbs light of certain wavelengths or colors selectively and is used for modifying the light that reaches a sensitized material esp. for increasing contrast, photographing through haze, or making color-separation negatives — called also color screen, color filter

specifying colors by reference either to other colors or to complex stimuli not in general identical with the actual stimulus and giving results not independent of abnormal in the observer's color vision — distinguished from *sp photometer* and *spectroradiometer* 2 : an instrument for chemical analysis of liquids by comparison of the color given liquid with standard colors — compare *COMPARATOR* 3 : *colorimetric* \kəlōr'ē-metrik\ or *color-i-metric* \kəlōr'ē-trik\ adj : of or relating to colorimetry (a ~ sense); also : determined or to be determined by the use of a colorimeter (~ analysis) — *color-i-met-ri-cal-ly* \kəlōr'ē-trēlē adj

colorimetric photometer n : a photometer measuring intensities for several spectral regions by means of successively interposed in the path of the light

colorimetric purity n : purity (sense 2a) found by evaluating the components in luminance terms

colorimetric quality n : CHROMATICNESS

color-i-met-ric \kəlōr'ē-metrik\ n pl but usu sing in COLORIMETRY

color-i-met-ri-cist \kəlōr'ē-mē-trist\ n -s : a special colorimetry

color-i-met-ry \kəlōr'ē-mē-trē, -tri\ n -es [ISV color + -metry] 1 : the science and practice of determining specifying colors — compare COLORIMETER 2 : quant chemical analysis by color comparison (as by a colorim or-blör \kəlōr'ē-ən, 'kālōr'ē-n, 'kōl'\ n -s [MexSp color SP, linnet, bright color, fr. color, fr. L. — more at *COLOR*) spiny Mexican tree (*Erythrina americana*) with show flowers and brilliant scarlet seeds

color index n 1 a : the photographic magnitude of a s other celestial body minus visual magnitude b : the diff between the magnitudes of a star or other celestial bc measured in two distinct wavelength regions of the spe and intended to indicate the object's color 2 : a figure presenting the ratio of the amount of hemoglobin to the n of red cells in a given volume of blood and being a meas the normality of the hemoglobin content of the individu

coloring n -s [ME colouring, fr. gerund of *coloren* to — more at *COLOR*] 1 a : the act of applying colorants application of color b : something that produces co color effects (pouring the ~ into the paint before m C (1) : the effect produced by applying or combining col shades (a painting with startling ~) (2) : natural colo combination of natural colors (the dun ~ of the mole startling ~ of the peacock) (a sunset with vivid ~) (3) PLEXION 3a (the ~ of a blonde) d : the final stage in b metallic surface wherein a high polish is imparted 2 a semblance; show, discourse; esp : a pleasing masking of thing bad (lies under the ~ of truth) b : a slanting suggesting added extrinsically : ORIENTATION, SLANT, BIA though given a Christian — here and there ... this po essentially heathen —Encyc. Americana) 3 a : COLOR; — COLOR 13 c : the indirect disclosure of sympathies or of view in writing or speaking 4 a : TIMBRE, QUALITY or TONE

coloratura, ornamentation

colorist \kəlōr'ē-ist\ n -s : COLORATION, COLORING colorist \kəlōr'ē-ist\ n -s [F coloriste, fr. *colorer* to co -ist, more at *COLOR*] 1 : one that colors: a : an designer, or composer who excels in the use of color, whom color is of prime importance b : one who dup the exact colors of customers' samples used in printing to order 2 a : a chemist who develops color formulas to match customer specifications b : one who a about fashionable color shades and combinations c who colors photographs

color-i-sis \kəlōr'ē-istik\ adj : relating to color or co ~ (truth in a landscape) (a concept formulated in ~ treatment of orchestral instruments) — *col-or-i-sis* \kəlōr'ē-sis\ adv

color lake n : LAKE 1b

color-less \kəlōr'ē-ləs\ adj [ME colourless, fr. colour + -less] 1 : without color; a : transparent and not distinguish any hue (a ~ glass) b : PALID, BLANCHED (a ~ yellow complexion) 2 : without distinctive character; as a : l variety and contrast, energetic individuality, animating sties such as spontaneity, or ability to command intere histories, so passionless and so lacking in distinctive m motive — Woodrow Wilson) b : free from any manif of partial or peculiar feeling : NEUTRAL (did not try to ~ story —W.A.White) — *col-or-less-ly* adv

colorless corpuscle n : LEUKOCYTE

color-less-ness n -es : the quality or state of having no color line n 1 : a line of stacked rifles on which the rest while troops are engaged in activities without arms 2 : line of social demarcation that some people maintain be the white race and colored races (as between white Negroes); also : a similar line between groups of lighter darker colored people

color-man \kəlōr'mān, -mān\ n, pl colormen 1 B dealer in colors and paints 2 a : a workman who mixes (as in leather manufacturing) b : one that plans, supervises or carries out dyeing processes in manufacturing 3 : on distributes identifying silks and numbers to jockeys 4 that obtains colored finishes in the electroplating of met effects by the use of various plating solutions

color mixer n : an apparatus for color mixture; esp : a provided with concentric colored disks slit along a radius dovetailed so as to reveal differently colored sectors when whirled rapidly blend into a circle of uniform col

color music n : the portrayal (as on a screen) of succ shades of color often in patterns and with rhythm simi that of sounds in music; also : the artistic effect so pro — compare CLAVILUX

color of office : the pretense or appearance of official at ity in one who being an officer in law or fact is without authority claimed

color of title 1 : an apparent but invalid title based on written instrument or record; also : the instrument itself : apparent ownership claimed by adverse possession

color organ n : CLAVILUX

color-o-ro-ta \kəlōr'ō-tōtā\ n -s [blend of *color* and *roto*] : gravure printed in more than one color

color party n, Brit : the color guard of a regiment

color phase n 1 a : a genetic variant manifested by the c of a skin or pelage color unlike the wild type c animal group in which it appears and usu. produced number of different factors interacting in accord with Meaws (the silver *color phase* of the red fox) b : an individual or a pelts or skin that is the result of such a g variant (these foxes are all *color phases*) — compare MUT. 2 : a seasonally variant pelage color (the drab summer phase of the ermine)

color-phobia \kəlōr'ō-fōbiā\ n -s : hatred of Negroes

color-phot-o-to \kəlōr'ō-fōtōtō\ n : a photograph produced by photography

color photography n : photographic production of pic in nearly natural colors

color-plate \kəlōr'ō-plāt, utsu'-ād+V\ n : any of a process color printing plates; also : a print made from a complete set of such plates

color point n : HUE POINT

color print n : a print in two or more colors

color printing n : the making of color prints esp. in the